

Department of Veterans Affairs



Data Architecture Repository Metadata Guidelines TBD, 2007

Bringing VA Data Resources Together



DAS

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1. Executive Overview

The Data Architecture Service (DAS) Program Management Plan (PMP) is an operational plan for managing the development of the enterprise data architecture. In collaboration with the Administrations and other Department of Veterans Affairs (VA) stakeholders, DAS will lead the development and implementation of enterprise-wide policies and governance structures for the effective management of data, horizontally throughout VA. In addition, DAS is responsible for leading and coordinating the Department's data standardization and data registration efforts, which will facilitate the identification of opportunities for data sharing and integration. The VA Data Registry, developed by DAS, will serve to maximize stakeholder data access, understanding and ease of use.

One of the current DAS initiatives is to establish technical standards such as data modeling standards and metadata guidelines. This Metadata Guidelines document has been written to support this initiative by defining a set of rules to assist data stewards and data architects with creating, storing, and sharing metadata and metadata attributes.

2. Introduction

The development of data standards improves the quality, relevance, consistency and availability of information about VA data. Data standards provide the acceptable representation of data for use within a defined context. The need for consistency and definition of data is vital to information sharing within the VA. Much of the work involved in establishing the DAR is in the development of data standards to ensure consistency of the data collected.

2.1. What is Metadata?

Metadata is defined to be data that defines and describes other data. The set of circumstances, purposes or perspectives for which some data are used as metadata is called the context. So, metadata are data about data provided within a context. Metadata is data, and data becomes metadata when it is used in this way. Data can be defined as a representation of facts, concepts or instructions while metadata can be defined as a structured description of the content, quality, condition or other characteristics of data. Metadata needs to be associated with data; otherwise the data cannot be understood.

2.2. What is a Metamodel?

In the context of data architecture, a metamodel is a data model that specifies one or more other data models. These data models describe metadata.

2.3. What is the DAR?

The VA Data Architecture Repository is a Web accessible repository system designed to store metadata and artifacts related to VA data architecture (DA) and the relationships among these artifacts. Artifacts include documentation of DA plans, policies, processes, requirements, standards, data models, data stores, data applications, and other information necessary to facilitate data architecture analysis and documentation. DAR provides a central entry point for



querying VA data architecture information. It enables users to manage DA artifacts, query repository content, and report status and statistics via the web interface.

3. Purpose, Audience, and Scope

3.1. Purpose

The purpose of the Metadata Guidelines (MDG) for the Data Architecture Repository (DAR) is to document and explain the content of the DAR. The MDG is a resource for stakeholders to use in understanding and navigating the DAR. The MDG describes to stakeholders what types of metadata can be stored in the DAR. The MDG includes logical data models for key DAR subject areas, and narrative commentary on DAR entities, attributes, and relationships. Key DAR concepts such as object classes and data elements will be explained clearly and concisely.

The MDG will help ensure standardization of DAR design, content, and modeling style, as well as mutual understanding between the DAR Program and the Technical Data Standards Committee (TDSC). Because the DAR metadata model ("metamodel") is being developed by multiple teams and projects, the use of a standard modeling style is particularly important. It will help ensure compliance with OneVA data architecture standards, enhance readability, limit complexity, and reduce the learning curve for new readers of the model.

3.2. Audience

The expected audience for the MDG includes department and administration staff, data stewards, information technology professionals, architects, modelers, designers, developers, data base administrators and implementers.

3.3. Scope

The current the design of the Data Architecture Repository (DAR) includes eight subject areas, with additional areas likely to be added in the future. Version 1.0 of the Metadata Guidelines (MDG v1.0) will document and explain the content of two of the most important subject areas: Common Logical, and Registry. Future versions of the MDG will document additional subject areas, and will also document any new constructs that may be added to the Common Logical and Registry subject areas.

Future MDG versions, or possibly supplemental documentation, will target a broader audience including non-technical business stakeholders. The MDG will include graphical views of the Common Logical and Meta Data Registry subject areas - these views will be presented using the IDEF1X notation as called for and to be in compliance with the OneVA Data Modeling Standards (DMS).

The DAR program itself is responsible for gathering and managing DAR requirements, and for DAR user documentation, training, and support.

This document is not intended to provide guidelines and requirements for metadata submission.

4. Key Concepts

4.1. Metadata

The International Standards Organization (ISO) definition of metadata is: "data about data."

Metadata provides descriptive information about the content, context, quality, condition, location, and other characteristics of data. It is essential to managing an organization's data assets and improving data understanding and integrity. Metadata can be generally categorized as business or technical. Business metadata, such as data element description, data lineage, quality, and business rules, primarily supports end-users. Technical metadata such as data element type, length, physical source, and size, supports architects, designers, developers and administrators during design, development, and maintenance.

4.2. Metamodel

A metamodel is a construction of concepts (things, terms, etc.) within a certain domain. A model is an abstraction of phenomena in the real world, and a metamodel is yet another abstraction, highlighting properties of the model itself. This model is said to conform to its metamodel like a program conforms to the grammar of the programming language in which it is written.

4.3. ISO/IEC 11179

The ISO/IEC 11179 Information Technology--Metadata Registries (MDR) specification developed by the International Standards Organization (ISO) and the International Electrotechnical Commission (IEC), defines a number of fields and relationships for Metadata Registries including a detailed metamodel for defining and registering administered items, of which the primary component is a Data Element.

ISO/IEC 11179 assists in different aspects of metadata creation, organization, and registration. Each part shall be used in conjunction with other parts. The 11179 standard is a multipart standard that includes the following parts:

- **11179-1 Framework:** There are no specific conformance criteria for this part of ISO/IEC. It is a framework that ties the other parts of 11179 together. Each of the other parts has its own conformance clause. This part of ISO/IEC 11179 introduces and discusses fundamental ideas of data elements, value domains, data element concepts, conceptual domains, and classification schemes essential to the understanding of this set of standards and provides the context for associating the individual parts of ISO/IEC 11179.
- **11179-2 Classification:** This part of ISO/IEC 11179 provides a conceptual model for managing classification schemes. There are many structures used to organize classification schemes and there are many subject matter areas that classification schemes describe. So, this Part also provides a two-faceted classification for classification schemes themselves.



- **11179-3 Registry Metamodel and Basic Attributes:** Specifies metadata items a registration applicant shall provide for each object to be registered. Detailed characteristics of each basic attribute are given. Three of these; name, definition and identification, are given special extensive treatment in 11179-4 (definitions) and 11179-5 (identification and naming).
- **11179-4 Formulation of Data Definition:** This part of ISO/IEC 11179 provides guidance on how to develop unambiguous data definitions. A number of specific rules and guidelines are presented in ISO/IEC 11179-4 that specify exactly how a data definition should be formed. A precise, well-formed definition is one of the most critical requirements for shared understanding of an administered item; well-formed definitions are imperative for the exchange of information. Only if every user has a common and exact understanding of the data item can it be exchanged trouble-free.
- **11179-5: Naming and Identification Principles:** This part of ISO/IEC 11179 provides guidance for the identification of administered items. Identification is a broad term for designating, or identifying, a particular data item. Identification can be accomplished in various ways, depending upon the use of the identifier. Identification includes the assignment of numerical identifiers that have no inherent meanings to humans; icons (graphic symbols to which meaning has been assigned); and names with embedded meaning, usually for human understanding, that are associated with the data item's definition and value domain.
- **11179-6 Registration:** This part of ISO/IEC 11179 provides instruction on how a registration applicant may register a data item with a central Registration Authority and the allocation of unique identifiers for each data item. Maintenance of administered items already registered is also specified in this document.

5. Data Architecture Repository

The DAR is a Web accessible metadata management system. It uses a COTS tool, Enterprise Repository, to configure the DAR metamodel to meet the needs of VA enterprise-level metadata management. The DAR provides a central entry point for querying VA data architecture information. It enables users to manage DA artifacts of their own. The DAR currently has eight (8) subject areas (domains). Each subject area has Entities specifically related to that subject area. Each entity has attributes specifically related to that entity. The content of the DAR will evolve, and the metamodel will be modified to accommodate the future needs of data management over time.

5.1. Current DAR Domains

The current DAR domains are:

- Business/EA
- Conceptual Information Model (CIM)
- Logical Data Model



- Metadata Registry (MDR)
- Physical Data Store
- UML
- ERwin
- Data Exchange/Web Services

The Logical Data Model and MDR domains will be discussed in more detail in sections 5.2 and 5.3. The metamodel diagrams for the Business/EA, CIM, Physical Data Store and Web Service subject areas are included in the appendices.

5.1.1. Business/EA

The business/EA domain tracks VA business lines, functions, business processes, and applications systems that support business lines, and the data classes used by business processes.

5.1.2. Conceptual Information Model (CIM)

The CIM domain is designed to document the conceptual information model of the VA enterprise

5.1.3. Logical Data Model

The logical data model domain is designed to document the metadata about logical data models. It tracks the information recommended by the IDEF1X standard, but not including graphical representation.

5.1.4. Metadata Registry (MDR)

The MDR domain is designed to serve as metadata registry. It conforms to the ISO 11179 at conformance level I, tracking the basic metadata attributes and relationships recommended by the standard.

5.1.5. Physical Data Store

The physical data store domain is designed to track the inventory of physical data stores and related information such as datasets and data packages that exist in the data store, the applications that access the data store, and the DBMS type of the data store.

5.1.6. UML

The UML domain adopts the MOF (Meta-Object Facility) structure to keep track of the meta objects of UML data models. It serves as a staging area for UML data import.

5.1.7. ERwin

The ERwin domain adopts the ERwin XMI literal format as the metamodel for importing information from Erwin XML file



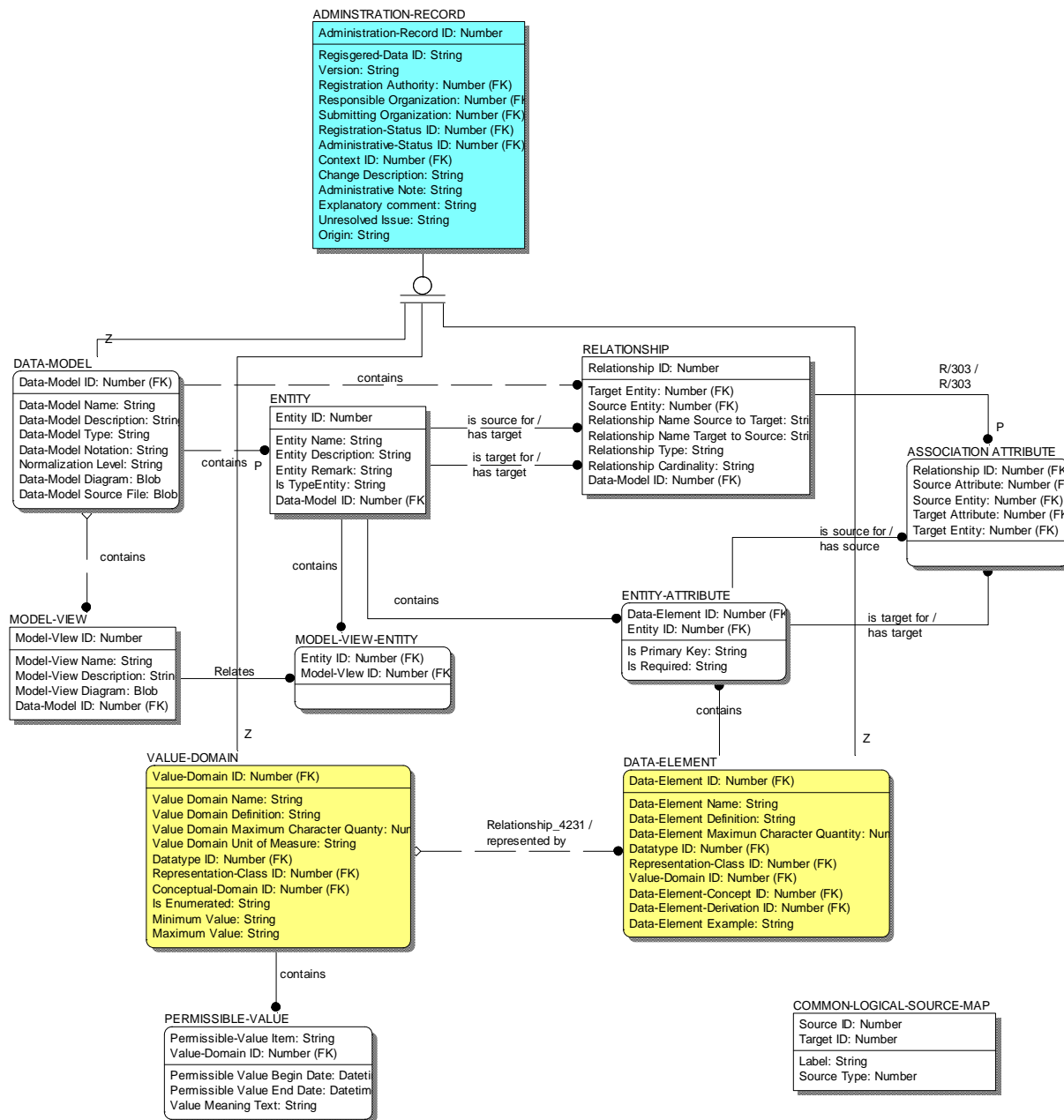
5.1.8. Data Exchange/Web Services

The web services domain describes the matamodel design for a web services registry.

5.2. Current DAR Domains

The logical data model subject area presents the view about how the DAR documents a logical data model. It tracks the information recommended by the IDEFX.1 except the graphical representation. Data from Erwin and UML xml files will be loaded to the Erwin and UML subject areas first and transformed to logical data model areas so that information will be presented in a more user-friendly format.

5.2.1. Metamodel



The following is a summary of the above diagram. The major entities for the Common Logical model view are Data-Model, Model-View, Entity, Relationship and Data-Element. Like the Data-Element and the Value-Domain, the Data-Model is a sub-type of the Administration-Record. A Data-Model consists of Entities and Relationships. A Data-Model may contain one or more Model-Views. A Model-View consists of one or more Entities and each Entity is contained within one or more Model-Views. An Entity contains one or more Data-Elements and a Data-Element exists within one or more Entities. A Value-Domain consists of zero, one or



more Permissible-Values. Two Entities participate in a Relationship. Details about these entities are in the following section of this document.

5.2.2. Entity & Attribute Definitions

The following tables lists all entities and their definitions included in the logical data model domain, as well as the attributes for each entity and their definitions. Although some attributes allow a null value, it is highly recommended that data stewards provide metadata as complete as possible while registering an item.

Entity Name	ENTITY
Definition	A concrete or abstract thing that is of interest to the enterprise

Attribute(s) of "ENTITY" Entity	
Name	Definition
Entity ID	The unique identifier of an entity
Entity Name	The entity name is a noun phrase that describes the set of things the entity represents. The noun phrase is in singular form, not plural.
Entity Description	A formal definition of the entity.
Entity Remark	Special remarks on the entity
Is TypeEntity	A flag that indicate if the entity is a type entity.
Data-Model ID	The unique identifier of the registered item

Entity Name	DATA-MODEL
Definition	A graphical and/or lexical representation of the data structure of an information system, specifying their properties, structure and inter-relationships. It is independent of the software or hardware mechanisms that are employed in presenting and using the data.

Attribute(s) of "DATA-MODEL" Entity	
Name	Definition
Data-Model ID	The unique identifier of the registered item

Attribute(s) of "DATA-MODEL" Entity	
Name	Definition
Data-Model Name	Descriptive terms of the logical data model
Data-Model Description	Detailed text description of the logical data model
Data-Model Type	A representation of the abstraction level in the model. It can be conceptual, logical.
Data-Model Notation	The format that the data model is represented in. It can be UML or IDEF1x.
Normalization Level	Normalization is the process of refining and regrouping attributes in entities according to the normal forms.
Data-Model Diagram	The graphical diagram of the logical data model
Data-Model Source File	The source file of the logical data model

Entity Name	MODEL-VIEW-ENTITY
Definition	An association entity that tracks entities in a specific subject area.

Attribute(s) of "MODEL-VIEW-ENTITY" Entity	
Name	Definition
Entity ID	The unique identifier of an entity
Model-View ID	The unique identifier of a data model subject area

Entity Name	MODEL-VIEW
Definition	A set of entities that support the mission of the enterprise from the perspective of a specific organizational view

Attribute(s) of "MODEL-VIEW" Entity	
Name	Definition
Model-View ID	The unique identifier of a data model subject area
Model-View Name	Descriptive terms of the subject area



Attribute(s) of "MODEL-VIEW" Entity	
Name	Definition
Model-View Description	Detailed text description of the subject area
Model-View Diagram	A graphic representation of the underlying semantics of a view.
Data-Model ID	The unique identifier of the registered item

Entity Name	ENTITY-ATTRIBUTE
Definition	Attributes of an entity

Attribute(s) of "ENTITY-ATTRIBUTE" Entity	
Name	Definition
Data-Element ID	The unique identifier of the registered item
Entity ID	The unique identifier of an entity
Is Primary Key	A flag that indicate whether or not the data element is the primary key of the entity
Is Required	A flag that indicates whether or not a null value is allowed for the data element.

Entity Name	VALUE-DOMAIN
Definition	A "Domain" represents a named and defined set of values that one or more attributes draw their values from.

Attribute(s) of "VALUE-DOMAIN" Entity	
Name	Definition
Value-Domain ID	The unique identifier of the registered item
Value Domain Name	Descriptive terms of the value domain
Value Domain Definition	Detailed text description of the value domain



Attribute(s) of "VALUE-DOMAIN" Entity	
Name	Definition
Value Domain Maximum Character Quantity	The maximum number of characters to represent the data element value
Value Domain Unit of Measure	The actual units in which the associated values are measured
Datatype ID	The unique identifier for a data type
Representation-Class ID	The unique identifier of the registered item
Conceptual-Domain ID	The unique identifier of the registered item
Is Enumerated	A flag that indicates whether or not the value domain is enumerated
Minimum Value	The lower boundary of a range domain rule.
Maximum Value	The upper boundary of a range domain rule.

Entity Name	DATA-ELEMENT
Definition	The smallest unit of information

Attribute(s) of "DATA-ELEMENT" Entity	
Name	Definition
Data-Element ID	The unique identifier of the registered item - Data Element
Data-Element Name	Descriptive terms of the data element
Data-Element Definition	Detailed text description of the data element
Data-Element Maximum Character Quantity	The maximum number of characters to represent the data element value
Datatype ID	The unique identifier for a data type
Representation-Class ID	The unique identifier of the registered item
Value-Domain ID	The unique identifier of the registered item
Data-Element-Concept ID	The unique identifier of the registered item



Attribute(s) of "DATA-ELEMENT" Entity	
Name	Definition
Data-Element-Derivation ID	The unique identifier of the data element derivation.
Data-Element Example	A representative value for a data element.

Entity Name	PERMISSIBLE-VALUE
Definition	The possible set of values for an enumerated value domain

Attribute(s) of "PERMISSIBLE-VALUE" Entity	
Name	Definition
Permissible-Value Item	An expression that is allowed in the enumerated value domain
Value-Domain ID	The unique identifier of the registered item
Permissible Value Begin Date	The date this value became/becomes allowed in the value domain
Permissible Value End Date	The date this value became/becomes no longer allowed in the value domain
Value Meaning Text	A line of business definition of a member of an enumerated value domain.

Entity Name	RELATIONSHIP
Definition	A connection between two entities.

Attribute(s) of "RELATIONSHIP" Entity	
Name	Definition
Relationship ID	The unique identifier of the relationship
Target Entity	The unique identifier of an entity
Source Entity	The unique identifier of an entity
Relationship Name Source to Target	Descriptive terms of the relationship from the source entity to the target entity



Attribute(s) of "RELATIONSHIP" Entity	
Name	Definition
Relationship Name Target to Source	Descriptive terms of the relationship from the target entity to the source entity
Relationship Type	
Relationship Cardinality	The number of entity instances that can be associated with each other in a relationship.
Data-Model ID	The unique identifier of the registered item

Entity Name	ASSOCIATION ATTRIBUTE
Definition	The attributes that connect the related entities

Attribute(s) of "ASSOCIATION ATTRIBUTE" Entity	
Name	Definition
Relationship ID	The unique identifier of the relationship
Source Attribute	The unique identifier of the registered item
Source Entity	The unique identifier of an entity
Target Attribute	The unique identifier of the registered item
Target Entity	The unique identifier of an entity

Entity Name	COMMON-LOGICAL-SOURCE-MAP
Definition	

Attribute(s) of "COMMON-LOGICAL-SOURCE-MAP" Entity	
Name	Definition
Source ID	
Target ID	
Label	



Attribute(s) of "COMMON-LOGICAL-SOURCE-MAP" Entity	
Name	Definition
Source Type	

Entity Name	ADMINISTRATION-RECORD
Definition	Administrative information for administered items in the repository

Attribute(s) of "ADMINISTRATION-RECORD" Entity	
Name	Definition
Administration-Record ID	The unique identifier of the registered item
Registered-Data ID	The data identifier assigned to the registered data by the registration authority.
Version	An identified instance of a Configuration Item within a product breakdown structure or Configuration Structure for the purpose of tracking and auditing Change history.
Registration Authority	The unique identifier of an organization
Responsible Organization	The unique identifier of an organization
Submitting Organization	The unique identifier of an organization
Registration-Status ID	The unique identifier of a designation of the status in the registration life-cycle of an administered item
Administrative-Status ID	The unique identifier assigned to a designation of the status in the administrative process of a Registration Authority for handling registration requests
Context ID	A unique identifier for the Context
Change Description	The description of what has changed in the Administered Item since the prior version of the Administered Item
Administrative Note	Any general note about the Administered Item
Explanatory comment	Descriptive comments about the Administered Item
Unresolved Issue	Any problem that remains unresolved regarding proper documentation of the Administered Item
Origin	The source (document, project, discipline or model) for the

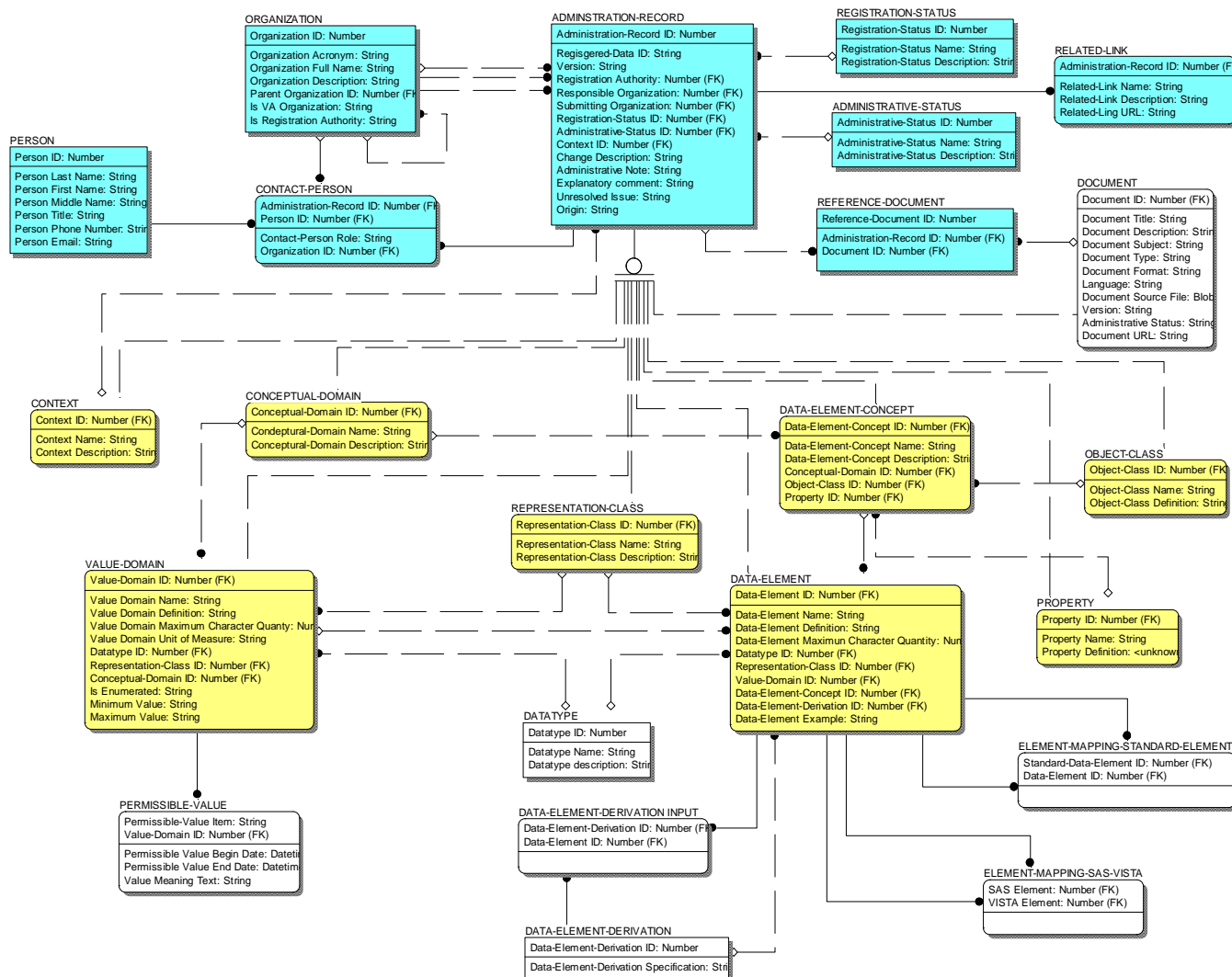


Attribute(s) of "ADMINISTRATION-RECORD" Entity	
Name	Definition
	Administered Item

5.3. Metadata Registry Domain

The DAR will serve as metadata registry as well. The metamodel design for the MDR domain has level I conformance to the ISO 11179. It supports tracking of basic metadata attributes and relationships recommended by the standard. It supports the registration of administered item types addressed in the ISO 11179 including: Conceptual Domain, Context, Data Element, Data Element Concept, Object Class, Property, Presentation Class, and Value Domain. The implementation of classification schemes in DAR is different from what is described in the ISO 11179. In the DAR, each classification scheme has its own specific class for storing the classification items under that scheme rather than placing all classification schemes and associated items in the Classification Scheme and Classification Scheme Item classes.

5.3.1. Metamodel



The major entities for the Meta Data Registry domain are Administration-Record and its subtype entities. An Administration-Record may have one or more Contact-Persons and a Person may be the Contact-Person for one or more Administration-Records. An Organization may submit and/or be responsible for one or more Administration-Records. An Administration-Record may have one or more Reference-Documents and one or more Related-Links. The Administration-Record has subtypes of Conceptual Domain, Context, Data-Element, Data-Element-Concept, Document, Object-Class, Property, Representation-Class, and Value-Domain. A Data-Element-Concept may have zero or one Object-Class and zero or one Property. A Data-Element is



developed from zero or one Data-Element-Concept. A Data-Element is associated with zero or one Representation-Class and zero or one Value-Domain. A Value-Domain represents zero or one Conceptual-Domain. A Value-Domain is associated with zero or one Representation-Class. An enumerated Value-Domain consists of one or more Permissible-Values. A Data-Element may be derived from other Data-Elements via a Data-Element-Derivation and a Data-Element-Derivation may use one or more Data-Elements as inputs. A Data-Element may be associated with one or more other Data-Elements. A Data-Element and a Value-Domain has a Datatype.

5.3.2. Entity & Attribute Definitions

The following tables contain a list of all entities and their definitions included in the Metadata Registry domain, as well as the attributes and their definitions for each entity. Data stewards are highly recommended to provide metadata as complete as possible while registering an item even though some attributes allow a null value.

Entity Name	CONCEPTUAL-DOMAIN
Definition	A set of valid Value Meanings

Attribute(s) of "CONCEPTUAL-DOMAIN" Entity	
Name	Definition
Conceptual-Domain ID	The unique identifier of the registered item
Conceptual-Domain Name	Descriptive terms of the conceptual domain.
Conceptual-Domain Description	Detailed text description of the value domain.

Entity Name	CONTACT-PERSON
Definition	An individual to whom an information item(s), a material object(s) and/or person(s) can be sent to or from in a specified context

Attribute(s) of "CONTACT-PERSON" Entity	
Name	Definition
Administration-Record ID	The unique identifier of the registered item
Person ID	The unique identifier of a person.



Attribute(s) of "CONTACT-PERSON" Entity	
Name	Definition
Contact-Person Role	The role that the person plays for the registered item. He/she may be the submitter or data steward
Organization ID	The unique identifier of an organization

Entity Name	CONTEXT
Definition	A universe of discourse in which a name or definition is used

Attribute(s) of "CONTEXT" Entity	
Name	Definition
Context ID	A unique identifier for the Context
Context Name	A name by which a metadata item (in this case the Context) is known within a specific context
Context Description	The textual description of the context.

Entity Name	DATA-ELEMENT
Definition	The smallest unit of information

Attribute(s) of "DATA-ELEMENT" Entity	
Name	Definition
Data-Element ID	The unique identifier of the registered item - Data Element
Data-Element Name	Descriptive terms of the data element
Data-Element Definition	Detailed text description of the data element
Data-Element Maximum Character Quantity	The maximum number of characters to represent the data element value
Datatype ID	The unique identifier for a data type
Representation-Class ID	The unique identifier of the registered item

Attribute(s) of "DATA-ELEMENT" Entity	
Name	Definition
Value-Domain ID	The unique identifier of the registered item
Data-Element-Concept ID	The unique identifier of the registered item
Data-Element-Derivation ID	The unique identifier of the data element derivation.
Data-Element Example	A representative value for a data element.

Entity Name	DATA-ELEMENT-CONCEPT
Definition	A concept that can be represented in the form of a Data Element, described independently of any particular representation

Attribute(s) of "DATA-ELEMENT-CONCEPT" Entity	
Name	Definition
Data-Element-Concept ID	The unique identifier of the registered item
Data-Element-Concept Name	Descriptive terms of the data element concept.
Data-Element-Concept Description	Detailed text description of the data element concept.
Conceptual-Domain ID	The unique identifier of the registered item
Object-Class ID	The unique identifier of the registered item
Property ID	The unique identifier of the registered item

Entity Name	DATA-ELEMENT-DERIVATION
Definition	The relationship among a Data Element which is derived, the rule controlling its derivation, and the Data Element(s) from which it is derived

Attribute(s) of "DATA-ELEMENT-DERIVATION" Entity	
Name	Definition
Data-Element-Derivation ID	The unique identifier of the data element derivation.
Data-Element-Derivation Specification	The detailed description of the derivation of the data element

Attribute(s) of "DATA-ELEMENT-DERIVATION" Entity

Name	Definition
	derivation.

Entity Name	DATA-ELEMENT-DERIVATION INPUT
Definition	Data elements inputs of a Data Element Derivation rule.

Attribute(s) of "DATA-ELEMENT-DERIVATION INPUT" Entity

Name	Definition
Data-Element-Derivation ID	The unique identifier of the data element derivation.
Data-Element ID	The unique identifier of the registered item

Entity Name	DATATYPE
Definition	A method of grouping types of data elements

Attribute(s) of "DATATYPE" Entity

Name	Definition
Datatype ID	The unique identifier for a data type
Datatype Name	Descriptive terms of the data type.
Datatype description	Detailed text description of the data type.

Entity Name	OBJECT-CLASS
Definition	A set of ideas, abstractions, or things in the real world that can be identified with explicit boundaries and meaning and whose properties and behaviors follow the same rules.

Attribute(s) of "OBJECT-CLASS" Entity



Name	Definition
Object-Class ID	The unique identifier of the registered item
Object-Class Name	Descriptive terms of the object class.
Object-Class Definition	Detailed text description of the object class.

Entity Name	ORGANIZATION
Definition	A unit consisting of people and processes established to perform out some functions.

Attribute(s) of "ORGANIZATION" Entity

Name	Definition
Organization ID	The unique identifier of an organization
Organization Acronym	The short name of the organization
Organization Full Name	The full name of the organization
Organization Description	A statement about the functions of the organization
Parent Organization ID	The unique identifier of an organization
Is VA Organization	A flag that indicates whether or not this organization is part of the Department of Veterans Affairs.
Is Registration Authority	A flag that indicates whether or not this organization is a metadata registration authority.

Entity Name	PERMISSIBLE-VALUE
Definition	The possible set of values for an enumerated value domain

Attribute(s) of "PERMISSIBLE-VALUE" Entity

Name	Definition
Permissible-Value Item	An expression that is allowed in the enumerated value domain
Value-Domain ID	The unique identifier of the registered item



Attribute(s) of "PERMISSIBLE-VALUE" Entity	
Name	Definition
Permissible Value Begin Date	The date this value became/becomes allowed in the value domain
Permissible Value End Date	The date this value became/becomes no longer allowed in the value domain
Value Meaning Text	A line of business definition of a member of an enumerated value domain.

Entity Name	PERSON
Definition	An individual of interest to VA.

Attribute(s) of "PERSON" Entity	
Name	Definition
Person ID	The unique identifier of a person.
Person Last Name	A family name, surname, or last name is the part of a person's name that indicates to what family he or she belongs.
Person First Name	A given name is a name, which specifies and differentiates between members of a group of individuals, especially a family, all of whose members usually share the same family name.
Person Middle Name	Many people's names include one or more middle names, placed between the first given name and the surname.
Person Title	The title of a person is a series of characters representing the way of addressing a person. It may imply a combination of gender and marital status: e.g. Mr, Mrs, and Miss. It may reflect social or professional status: e.g. Dr; Rev; Lady, Lt.Col.
Person Phone Number	A sequence of decimal digits (0-9) that is used for identifying a destination telephone line in a telephone network that is related to a person.
Person Email	The Electronic mail (abbreviated "e-mail" or, often, "email") address related with a person.

Entity Name	PROPERTY
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Definition	A characteristic common to all members of an Object Class
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Attribute(s) of "PROPERTY" Entity

Name	Definition
Property ID	The unique identifier of the registered item
Property Name	Descriptive terms of the property.
Property Definition	Detailed text description of the property.

Entity Name	ADMINISTRATION-RECORD
Definition	Administrative information for administered items in the repository

Attribute(s) of "ADMINISTRATION-RECORD" Entity

Name	Definition
Administration-Record ID	The unique identifier of the registered item
Registered-Data ID	The data identifier assigned to the registered data by the registration authority.
Version	An identified instance of a Configuration Item within a product breakdown structure or Configuration Structure for the purpose of tracking and auditing Change history.
Registration Authority	The unique identifier of an organization
Responsible Organization	The unique identifier of an organization
Submitting Organization	The unique identifier of an organization
Registration-Status ID	The unique identifier of a designation of the status in the registration life-cycle of an administered item
Administrative-Status ID	The unique identifier assigned to a designation of the status in the administrative process of a Registration Authority for handling registration requests
Context ID	A unique identifier for the Context
Change Description	The description of what has changed in the Administered Item since the prior version of the Administered Item



Attribute(s) of "ADMINISTRATION-RECORD" Entity	
Name	Definition
Administrative Note	Any general note about the Administered Item
Explanatory comment	Descriptive comments about the Administered Item
Unresolved Issue	Any problem that remains unresolved regarding proper documentation of the Administered Item
Origin	The source (document, project, discipline or model) for the Administered Item

Entity Name	REPRESENTATION-CLASS
Definition	The classification of types of representation. It may be a code, count, currency, and date. graphic, quantity, text, picture, etc.

Attribute(s) of "REPRESENTATION-CLASS" Entity	
Name	Definition
Representation-Class ID	The unique identifier of the registered item
Representation-Class Name	Descriptive terms of the representation class.
Representation-Class Description	Detailed text description of the representation class.

Entity Name	VALUE-DOMAIN
Definition	A "Domain" represents a named and defined set of values that one or more attributes draw their values from.

Attribute(s) of "VALUE-DOMAIN" Entity	
Name	Definition
Value-Domain ID	The unique identifier of the registered item
Value Domain Name	Descriptive terms of the value domain
Value Domain Definition	Detailed text description of the value domain



Attribute(s) of "VALUE-DOMAIN" Entity	
Name	Definition
Value Domain Maximum Character Quantity	The maximum number of characters to represent the data element value
Value Domain Unit of Measure	The actual units in which the associated values are measured
Datatype ID	The unique identifier for a data type
Representation-Class ID	The unique identifier of the registered item
Conceptual-Domain ID	The unique identifier of the registered item
Is Enumerated	A flag that indicates whether or not the value domain is enumerated
Minimum Value	The lower boundary of a range domain rule.
Maximum Value	The upper boundary of a range domain rule.

Entity Name	REFERENCE-DOCUMENT
Definition	The references of the Administered Item

Attribute(s) of "REFERENCE-DOCUMENT" Entity	
Name	Definition
Reference-Document ID	The unique identifier of the reference document.
Administration-Record ID	The unique identifier of the registered item
Document ID	The unique identifier of the registered item

Entity Name	ELEMENT-MAPPING-STANDARD-ELEMENT
Definition	The mapping between standard data elements and other application elements.

Attribute(s) of "ELEMENT-MAPPING-STANDARD-ELEMENT" Entity	
Name	Definition


Attribute(s) of "ELEMENT-MAPPING-STANDARD-ELEMENT" Entity

Name	Definition
Standard-Data-Element ID	The unique identifier of the registered item
Data-Element ID	The unique identifier of the registered item

Entity Name	REGISTRATION-STATUS
Definition	Collection of designation statuses in the registration life cycle of administered items

Attribute(s) of "REGISTRATION-STATUS" Entity

Name	Definition
Registration-Status ID	The unique identifier of a designation of the status in the registration life-cycle of an administered item
Registration-Status Name	Descriptive terms of a designation of registration status
Registration-Status Description	A longer descriptive terms of a designation of registration status

Entity Name	ADMINISTRATIVE-STATUS
Definition	Collection of designation statuses in the administrative process of a Registration Authority for handling registration requests

Attribute(s) of "ADMINISTRATIVE-STATUS" Entity

Name	Definition
Administrative-Status ID	The unique identifier assigned to a designation of the status in the administrative process of a Registration Authority for handling registration requests
Administrative-Status Name	The name of a designation of the status in the administrative process of a Registration Authority for handling registration requests
Administrative-Status Description	The description of a designation of the status in the administrative process of a Registration Authority for handling registration


Attribute(s) of "ADMINISTRATIVE-STATUS" Entity

Name	Definition
	requests

Entity Name	DOCUMENT
Definition	

Attribute(s) of "DOCUMENT" Entity

Name	Definition
Document ID	The unique identifier of the registered item
Document Title	The name of the document
Document Description	A statement of the content of the document
Document Subject	The topic or keyword of the content of the document
Document Type	A term that categorizes the nature of the content of the document
Document Format	
Language	The language in which the document is written.
Document Source File	A reference to the document itself
Version	The version of the item
Administrative Status	The designation of the status in the administrative lifecycle
Document URL	A Uniform Resource Locator reference for the document itself

Entity Name	RELATED-LINK
Definition	

Attribute(s) of "RELATED-LINK" Entity

Name	Definition
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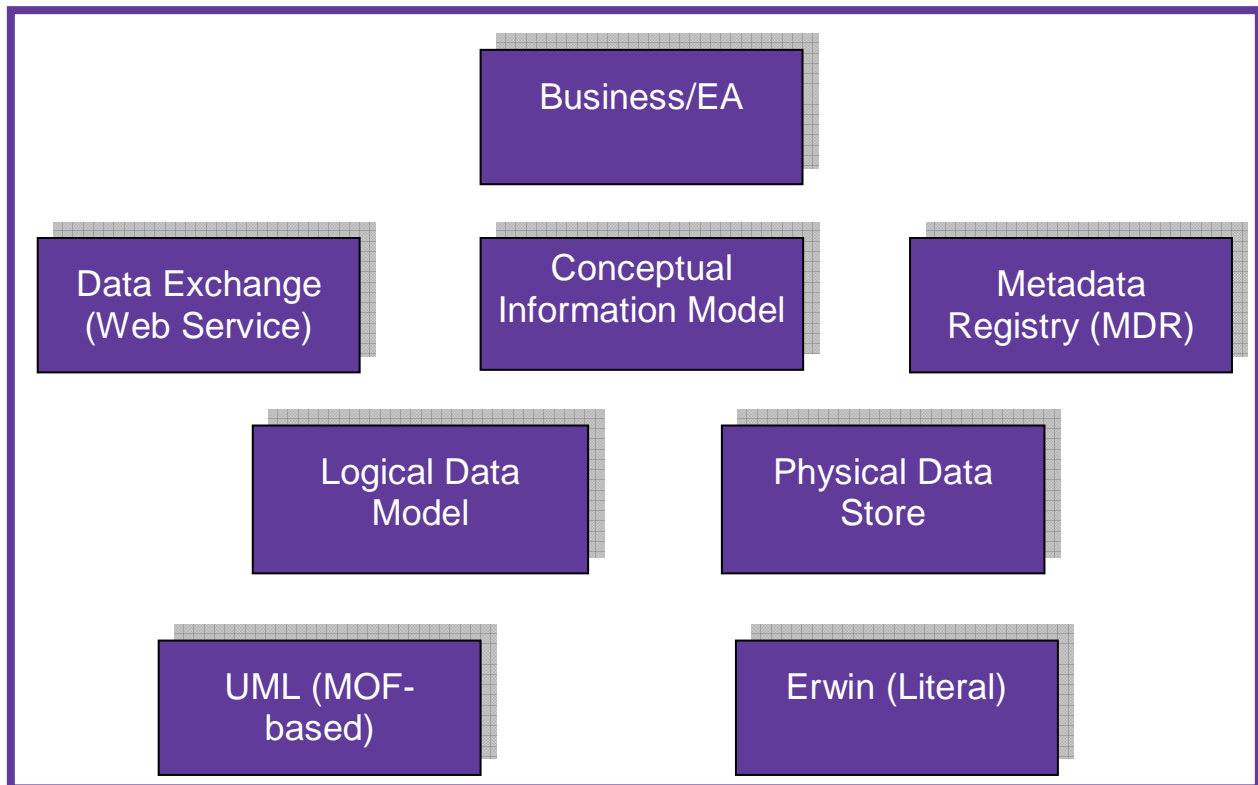
Attribute(s) of "RELATED-LINK" Entity	
Name	Definition
Administration-Record ID	The unique identifier of the registered item
Related-Link Name	
Related-Link Description	
Related-Ling URL	

Entity Name	ELEMENT-MAPPING-SAS-VISTA
Definition	

Attribute(s) of "ELEMENT-MAPPING-SAS-VISTA" Entity	
Name	Definition
SAS Element	The unique identifier of the registered item - Data Element
VISTA Element	The unique identifier of the registered item - Data Element

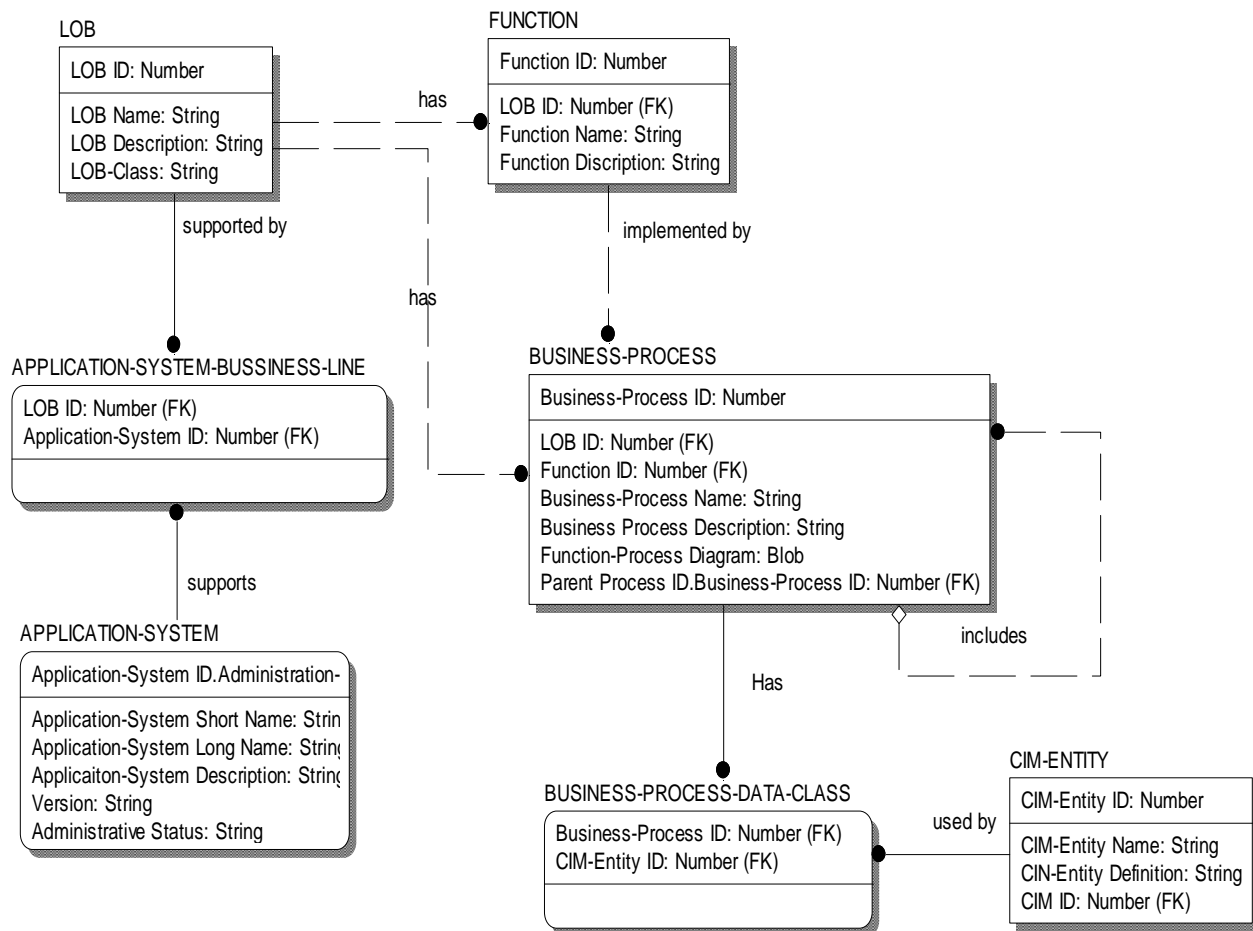
APPENDIX A – Metamodels for Other DAR Subject Areas

The following diagram shows the eight different subject areas in the DAR metamodel.

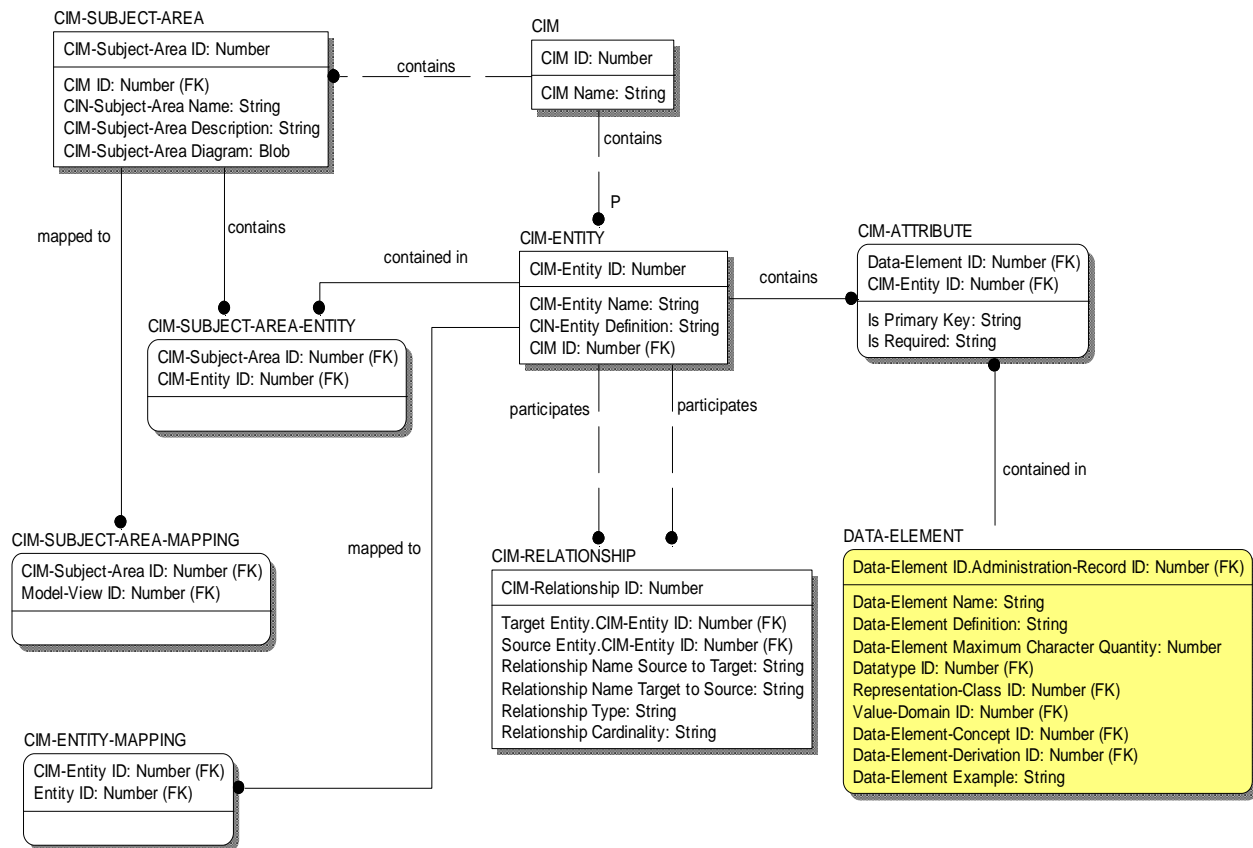


The detailed metamodel designs for MDR, Logical Data Model have been discussed in the main document. This appendix displays the metamodel designs for Business/EA, CIM, Physical Data Store, and Data Exchange/Web Service subject areas.

DAR – Business/EA



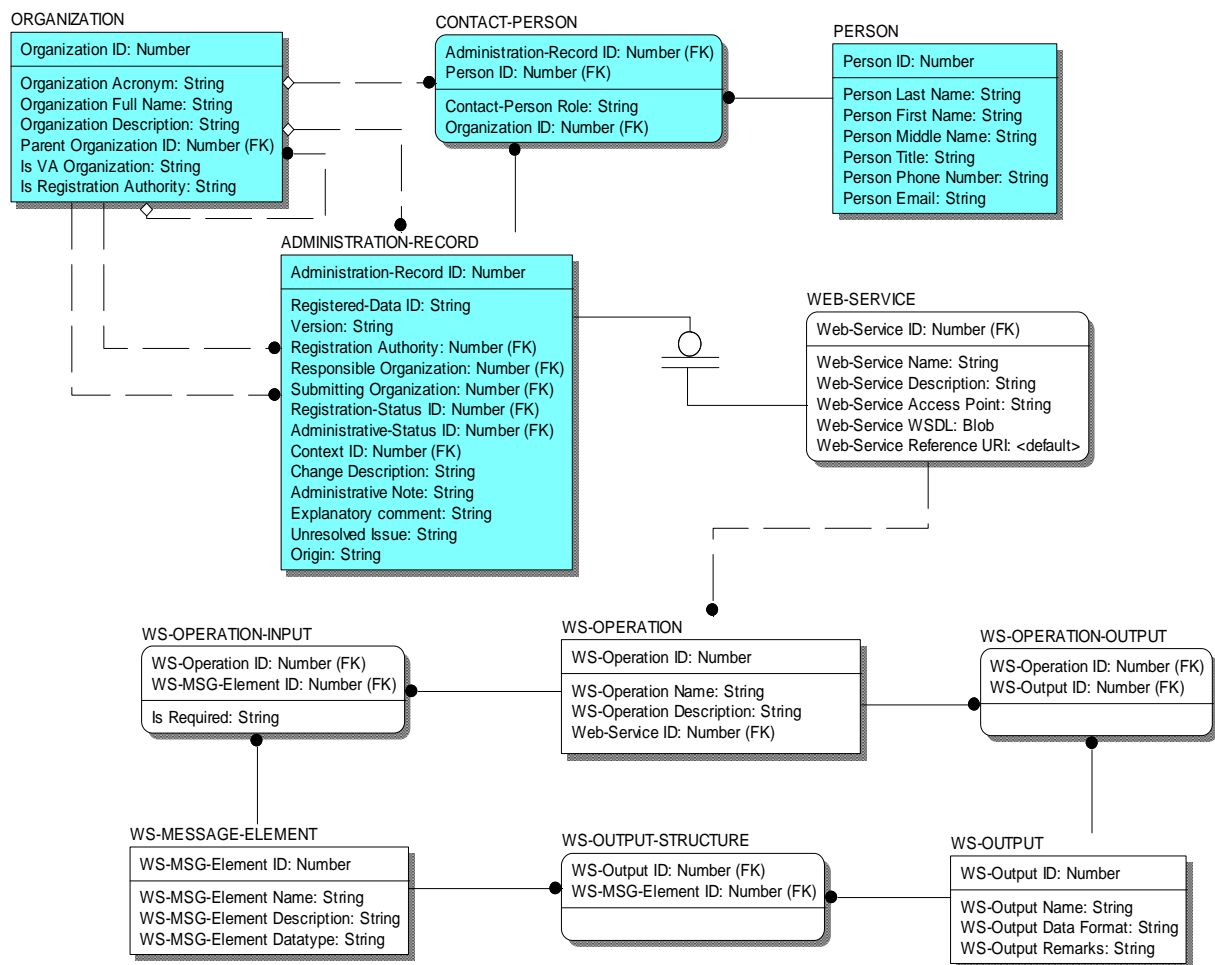
DAR - CIM Subject Area



Bringing VA Data Resources Together



Web Service Subject Area





Glossary